

Appl. No. 10/017,252

Ex parte Quayle Office Action dated October 18, 2006
Reply to Ex parte Quayle dated November 30, 2006RECEIVED
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A semiconductor signal manipulating device comprising:
a signal input carrier for inputting an applied electrical signal and comprising an input terminal in electrical communication with a input contact, the input contact being within a well region, the input contact and the well region being of a same conductivity type;
a plurality of conductive fingers in electrical communication with the input contact; and
signal manipulating means in electrical communication with the plurality of conductive fingers and the well region for manipulating the applied electrical signal upon being activated by application of an electrical manipulating signal to the plurality of conductive fingers.

2. (Original) The semiconductor signal manipulating device of claim 1, wherein the plurality of conductive fingers are comprised of polysilicon and are disposed over a gate oxide layer.

3. (Original) The semiconductor signal manipulating device of claim 1, wherein the signal manipulating means is for manipulating the applied electrical signal by applying a first electrical manipulating signal to a first set of the plurality of conductive fingers and a second electrical manipulating signal to a second set of the plurality of conductive fingers, the first set of the plurality of conductive fingers and the second set of the plurality of conductive fingers being arranged in an alternating configuration, and the second electrical manipulating signal being opposite in polarity to the first electrical signal.

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4. (Original) The semiconductor signal manipulating device of claim 3, wherein the signal manipulating means is for creating a potential variance in the well region in which an electrical potential under the first set of the plurality of conductive fingers is shifted 180° in phase from the electrical potential under the second set of the plurality of conductive fingers.
5. (Original) The semiconductor signal manipulating device of claim 1, wherein the applied input electrical signal is channelized by the well region.
6. (Original) The semiconductor signal manipulating device of claim 1, wherein the input electrical signal is an RF current that is channelized by the well region.
7. (Original) The semiconductor signal manipulating device of claim 1, further comprising a signal output carrier comprising a plurality of output contacts, each of the plurality of output contacts being in electrical communication with a corresponding one of the plurality of conductive fingers, the plurality of output contacts further being located within a moderately doped region different in conductivity type than the plurality of output contacts and the well region.
8. (Currently amended) The semiconductor signal manipulating device of claim 7, wherein the signal output carrier comprises a first terminal and a second terminal in electrical communication with the plurality of heavily doped output contacts, the first terminal being in electrical communication with the a first set of the plurality of conductive fingers and the second terminal being in electrical communication with the a second set of the plurality of conductive fingers.

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9. (Original) The semiconductor signal manipulating device of claim 1, wherein the applied electrical signal is time varied.

10. (Original) The semiconductor signal manipulating device of claim 1, wherein the signal manipulating means further comprises first and second terminals in parallel with one another, the first terminal for applying a first electrical signal and the second terminal for applying a second electrical signal, the first and second electrical signals for creating a capacitive variance within the well region.

11. (Original) The semiconductor signal manipulating device of claim 1, wherein the heavily doped input contact and the well region are of N-type conductivity.

12. – 22. (Canceled)